CONSTRUCTION, MANIPULATION, AND COMPARISON OF A MULTI-DIMENSIONAL SEMANTIC SPACE

ABSTRACT

5   A directed set can be used to establish contexts for linguistic concepts: for example, to aid in answering a question, to refine a query, or even to determine what questions can be answered given certain knowledge. A directed set includes a plurality of elements and chains relating the concepts. One concept is identified as a maximal element. The chains connect the maximal element to each concept in the directed set, and more than one chain can connect

10   the maximal element to any individual concept either directly or through one or more intermediate concepts. A subset of the chains is selected to form a basis for the directed set. Each concept in the directed set is measured to determine how concretely each chain in the basis represents it. These measurements for a single concept form a vector in Euclidean k-space. Distances between these vectors can be used to determine how closely related pairs of

15   concepts are in the directed set.